

Application Serial No. 10/786,790
Reply to Office Action of September 17, 2009

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PATENT

Docket: CU-3608

Amendments to the Claims

The listing of claims presented below replaces all prior versions, and listings, of claims in the application.

Listing of claims:

1– 4. (cancelled)

5. (currently amended) A method of producing a coating solution for forming a wettability-varied pattern, comprising mixing a neutral sol solution of titanium oxide, whose pH is in a neutral range and which is obtained by mixing titanium oxide and alkyl silicate represented by a general formula of $\text{Si}_n\text{O}_{n+1}(\text{OR})_{2n+2}$, wherein R represents an alkyl group and n is an integer in a range of 0 to 6, with a solution of hydrolyzed fluoralkylsilane represented by $\text{Y}_n\text{SiX}(4-n)$, wherein Y represents fluoralkyl group, X represents an alkoxy group, an acetyl group, or a halogen, and n is an integer in a range of 0 to 3, thereby preparing a coating solution for forming a wettability-varied pattern, wherein pH of the solution of hydrolyzed fluoralkylsilane is adjusted in advance to 5 to 7 so that the such that pH of the prepared coating solution for forming a wettability-varied pattern is in a range of 5 to 9.

6-22. (cancelled)

23. (previously presented) The method of producing a coating solution for forming a wettability-varied pattern according to claim 5, wherein a mixture ratio of the neutral sol solution of titanium oxide to the solution of hydrolyzed fluoralkylsilane is 1: 0.1 to 1, wherein "1" represents a weight of the neutral sol solution of titanium oxide and "0.1 to 1" represents a weight of the solution of hydrolyzed fluoralkylsilane.

24. (previously presented) The method of producing a coating solution for forming a wettability-varied pattern according to claim 5, wherein a content of the alkyl silicate contained in the prepared coating solution for forming a wettability-varied pattern is in a range of 0.7 to 10 in the weight ratio ($\text{SiO}_2/\text{TiO}_2$) when a weight amount of silicon contained in the alkyl silicate is converted to a weight amount of

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SiO₂ and a weight amount of titanium in the titanium oxide is converted to a weight amount of TiO₂.

25. (previously presented) The method of producing a coating solution for forming a wettability-varied pattern according to claim 5, comprising a process of preparing a neutral sol solution of titanium oxide, wherein a titanium oxide sol and the alkyl silicate are mixed and neutralized, prior to mixing the neutral sol solution of titanium oxide and the solution of hydrolyzed fluoroalkysilane, to prepare the neutral sol solution of titanium oxide.

26. (previously presented) The method of producing a coating solution for forming a wettability-varied pattern according to claim 25, wherein at least one of the titanium oxide sol or the alkyl silicate is diluted with a hydrophilic organic solvent at the time of mixing the titanium oxide sol and the alkyl silicate in the process of preparing a neutral sol solution of titanium oxide.

27. (previously presented) The method of producing a coating solution for forming a wettability-varied pattern according to claim 26, wherein both of the titanium oxide sol and the alkyl silicate are diluted with the hydrophilic organic solvent.